



Stormwater Management Utility Implementation



Current Water Resources Program – as of FY07 * Department of Public Works

Stormwater Management

Development Permit Reviews
for SWM and Sediment Control

SWM and Sediment Control
Construction Inspection

SWM Policies and Budget
Management

Watershed Studies

SWM and Stream Restoration
Projects

Public SWM Facility Inspection
and Maintenance

Existing Program (FY08)
\$3,457,002

SWM Fund

(Income Source - Developer Permit
Fees and SWM Contributions,
Interest Income, Grants)

Environmental Management

Development Review for
Environmental Issues

NPDES Permit Compliance

Education and Outreach

Illicit Discharge Detection and
Elimination (IDDE)

Improves City's Municipal
Operations for Better Water
Resources Protection

Existing Program (FY08)
\$69,034**

General Fund

(No Revenue Generated)

Drainage and Conveyance

Development Permit Review for
Drainage and Conveyance

Storm Drain Construction
Inspections

Drainage Policies and Budget
Management

Drainage Studies

Storm Drain Repair and
Extension Projects

Public Storm Drain Operations
Maintenance

Existing Program (FY08)
\$1,089,940

General Fund

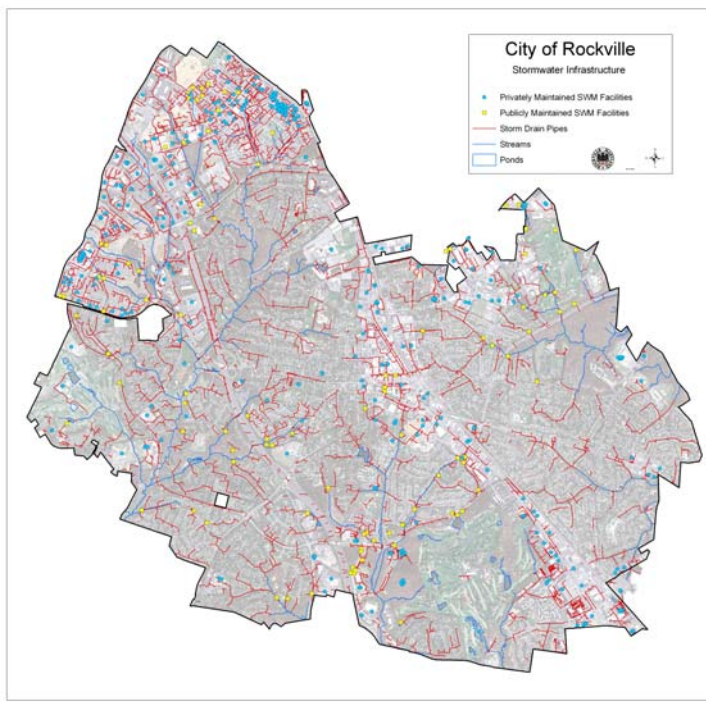
(Income Source - Developer PWK
Permit Fees)

*Represents FY2007 snapshot projected forward to estimate FY2008 cost.

**Does not include new Environmental Management Chief position.

**DPW
MANAGES
OR
OVERSEES:**

- 32 miles of streams
- 103 public SWM facilities, including 51 ponds
- 393 privately owned SWM facilities
- 99 miles of public storm drain pipes
- 5,767 storm drain curb inlets



City of Rockville

Stormwater Management Utility

Problem – The City's Water Resources Program Is Inadequate

- Does not meet federal National Pollutant Discharge Elimination System (NPDES) permit requirements
- Inspections, preventative maintenance, and performance assessment are not consistently provided
- The City's water resources funding is projected to run out in Fiscal Year 2012.



Solution – Improve Water Resources Services and Programs

- Add new programs to meet regulatory requirements
- Upgrade services for inspections, preventative maintenance, and assessment
- Create new Stormwater Management Utility fee to share program costs between all property owners in Rockville

SWM Utility Study Process

- **2003 - Staff evaluated SWM Fund fiscal stability**
- **2004 - Mayor and Council directed staff to obtain a detailed SWM programmatic and funding study**
- **July, 2005 - The City hired AMEC Earth & Environmental and formed a Stormwater Advisory Group (SAG) of residents and businesses to help assess SWM priorities and funding options.**
- **2005-06 - AMEC worked with staff and SAG to prepare:**
 - ◆ Current snapshot of City's water resources program and manpower
 - ◆ Recommendations for additional elements to meet City's regulatory and maintenance needs
 - ◆ Technical analysis and creation of a GIS imperviousness layer and property statistics for Rockville
 - ◆ Financial projections and funding comparisons for SWM program
- **Nov, 2006 - Mayor and Council directed staff to proceed with implementing a SWM Utility fee**

Issues Requiring City Action

- **The City's storm drain infrastructure is aging and will require more frequent maintenance and rehabilitation.**



- ◆ Example – 5 miles of Corrugated Metal Pipe storm drain needs repair or replacement in the next decade to avoid collapses.
- ◆ The City does not have an ongoing preventive inspection and maintenance program for storm drains.

- **Older neighborhoods are under-served by today's standards.**

- ◆ Example - DPW is still working to implement storm drain upgrades and extensions recommended in 1974 to address flooding problems.
- ◆ Example - Less than half of the City's SWM facilities meet or partially meet today's water quality treatment standards.

Issues Requiring City Action

New State regulatory requirements

- ◆ Maryland SWM design standards changed significantly in 2001. Old designs are not considered sufficient to prevent stream erosion or capture pollutants.
- ◆ New regulations have resulted in more on-site facilities, meaning fewer SWM monetary contributions for regional facilities.

Under the City's federally mandated National Pollutant Discharge Elimination System (NPDES) permit (through US EPA and Maryland Dept. of the Environment), Rockville must:

- ◆ Strengthen efforts to detect and eliminate illicit discharges.
- ◆ Increase public participation and education and outreach.
- ◆ Improve pollution control for City operations and maintenance programs.



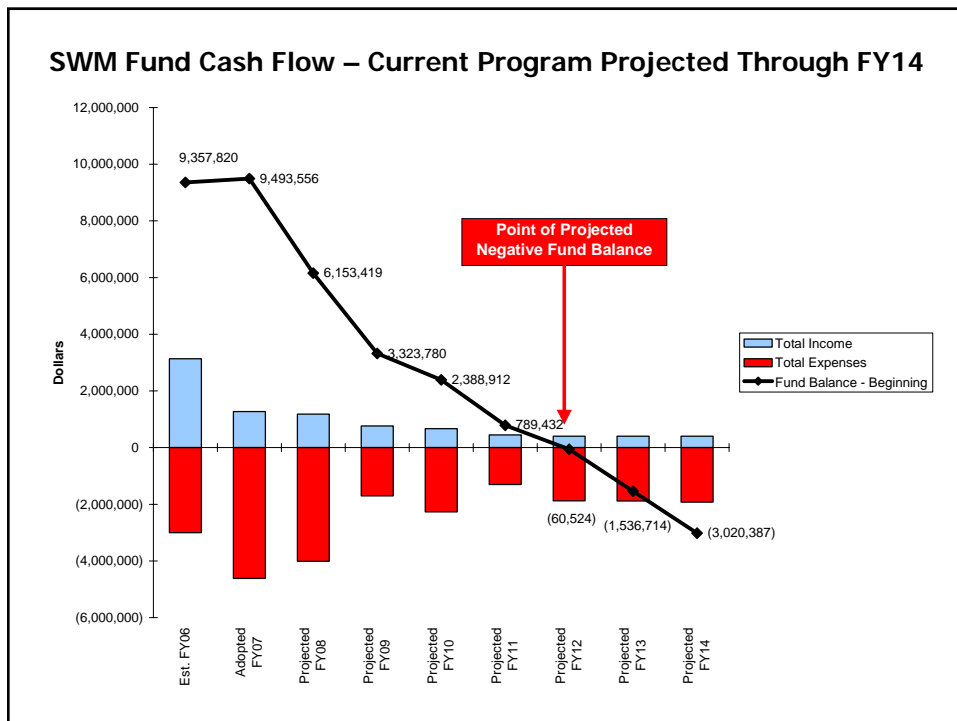
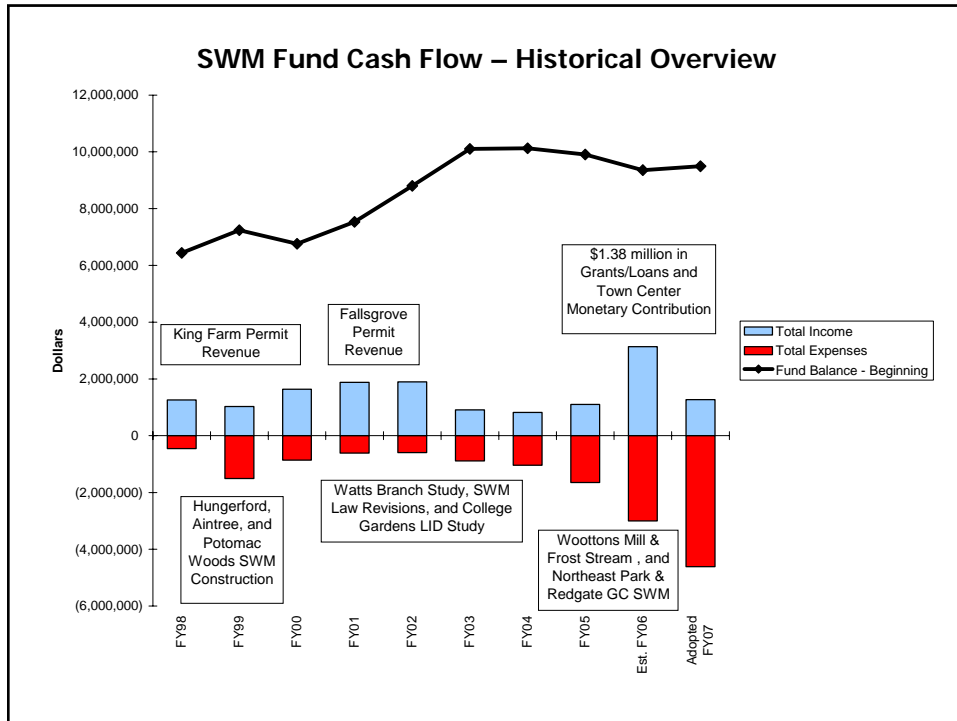
Issues Requiring City Action

- **Chesapeake Bay 2000 Agreement establishes ambitious goals to restore the health of the Chesapeake Bay.**
 - ◆ The Bay Agreement sets a goal to reduce nutrient loads by 40% by 2010 to improve water quality.
 - ◆ The federal government can use the City's NPDES permit to mandate improvements if they are not done voluntarily by 2010.
 - ◆ Under NPDES, the U.S. EPA may impose numeric pollutant limits for City streams (bacteria, nutrient, and sediment loads).
- **The City is making progress but additional investment is needed:**
 - ◆ Streambank erosion produces about 2/3 of the sediments entering the Chesapeake Bay.
 - ◆ The City has restored about two miles of streams in the past 10 years.
 - ◆ Eight additional miles of the 32 stream miles in Rockville need restoration as identified in watershed studies.



Stormwater Management Fund

- **Today's SWM Fund covers development permits and compliance, watershed studies, stormwater retrofits, and stream restoration.**
- **The SWM Fund does not currently cover the storm drain system, watershed education, water quality compliance, and floodplain management.**
- **Sources of income from 1978 until now have been:**
 - ◆ Developer SWM monetary contributions
 - ◆ Developer SWM and Sediment Control Permit fees
 - ◆ Interest income
 - ◆ State and Federal Grants
- **The SWM Fund is the City's only enterprise fund (unlike sewer and water) without a dedicated user fee.**
- **Even without adding new services, the SWM Fund is projected to run out of money by Fiscal Year 2012.**





Rockville's SWM Utility Program – New Program Elements

- Implement program to control illicit storm drain discharges
- Increase public watershed education and outreach
- Establish more reliable benchmarks and performance measurement tools to better assess progress
- Complete mapping of public storm drain system
- Implement storm drain upgrades and improvements
- Implement public storm drain inspection and preventative maintenance program
- Inspect and enforce maintenance of private SWM facilities
- Create an operating reserve for the SWM Fund to stabilize the program similar to other enterprise funds



What Are The Financial Implications?

- Improved water resources programs require additional staff, consultants and contractor services. Therefore, SWM Fund spending will go up.
- The SWM Fund will continue to get some revenue (income) from development projects and grants.
- The City will spend the surplus balance in the SWM Fund down to a safe reserve level over six years.
- New revenue sources are needed to fill the remaining gap between SWM Fund spending and existing revenue sources.



What Does This Mean To Me?

- More storm drains will be maintained to prevent sudden collapses
- More SWM facilities will be upgraded to current state standards
- All SWM facilities will be properly cleaned and maintained
- SWM and stream restoration projects will be re-assessed several years after construction to see if they're working
- More drainage problems will be evaluated and improvements constructed
- DPW will work with residents, businesses and City facilities on watershed education and improving watershed practices
- DPW will monitor and enforce water quality protection laws against illicit dumping and discharge to storm drains and streams



Funding Alternatives considered...

- The Mayor and City Council considered several options to fund water resources programs. The two most practical choices were:



- ◆ Increase the **Property Tax** (based on property values) to provide more revenue through the General Fund.
- ◆ Create a **SWM Utility Fee** (based on amount of impervious surface) on each property.

HOW IMPERVIOUS AREA CREATES DEMAND FOR WATER RESOURCES SERVICES

- Rain soaks into forests, gardens, and other vegetated areas. This water stays in plants and the ground so it doesn't reach our streams.
- Rain 'runs off' impervious surfaces (rooftops, paving, parking lots, etc), so more water gets into our streams faster. It carries along chemicals, dirt and other pollutants.
- Impervious surface area directly correlates to the quality and stability of our streams.

**MORE
IMPERVIOUS
SURFACE** = **MORE RUNOFF**

**MORE RUNOFF = BIGGER STORM DRAINS
BIGGER SWM FACILITIES
MORE STREAM EROSION, &
WORSE WATER QUALITY**



City of Rockville

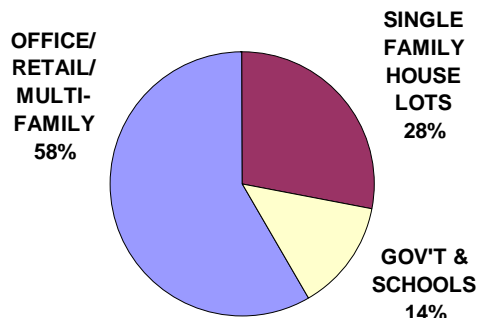
Stormwater Management Utility

SHOULD WE PAY BY IMPERVIOUS AREA OR PAY BY PROPERTY VALUE?

Only 28% of Rockville's
impervious area is on
single family house lots

BUT...

67% of Rockville's
property taxes come from
residential properties

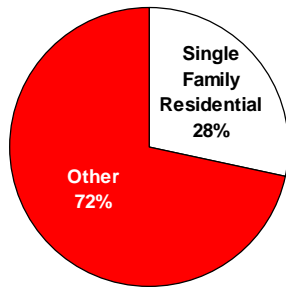


CITY'S IMPERVIOUS SURFACES



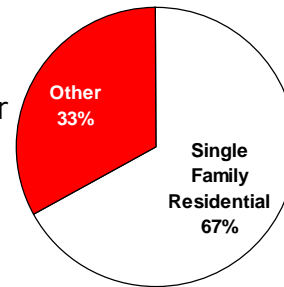
SHOULD WE PAY BY IMPERVIOUS AREA OR PAY BY PROPERTY VALUE?

Under Utility Fee



Under Property Tax

How Remaining
Water Resources
Program Costs (After
Developer Fees &
Contributions and
Grants) Would Be
Shared Among
Property Owners



Factors considered for Funding...

- **Fair and Equitable** - Those who create the greatest water resources demand should pay a greater share of the cost.
- **Stable and Sustainable** - The income source must be stable to address multi-year objectives.
- **Adequate and Flexible** - The income source should be adequate to fund the desired level of service and flexible enough to respond to shifting priorities.



What is a Stormwater Utility Fee?

- A SWM Utility Fee is a **charge for stormwater management (SWM) services**, similar to water or sewer utilities
- **SWM services include** stream restoration, SWM treatment, storm drainage and compliance with water resources regulations
- The SWM Utility Fee is based on an **individual property's impervious area** (rooftops, paving, parking lots, etc.)
- Impervious area is measured in **Equivalent Residential Units (ERUs)** – a unit of impervious area equal to the impervious coverage found on a typical single family lot in the community.



National trends...

- The first utility was adopted in 1972 in Bellevue, Washington.
- 600+ stormwater utilities are currently established nation-wide.
- Annual SWM Utility fees for single family lot owners:
Portland, OR- \$201.84 Seattle, WA - \$136.10
Asheville, NC - \$28.08 Fort Collins, CO - \$199
Oklahoma City, OK - \$40.80 (in 2005)
Kissimee, FL - \$42 (in 2005)



What have others done regionally?

- **Montgomery County** - Water Quality Protection Charge utility fee that focuses on maintenance - \$25.23 annually for residents
- **Takoma Park** – utility fee. Annual residential rate is \$48
- **District of Columbia** uses the General Fund.
- **Prince George's County** taxes real property at \$0.135 per \$100.
- **Fairfax County** dedicated a penny on the real property tax above the basic program in 2005.

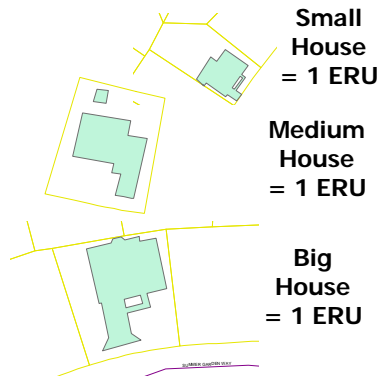


How Billing Works Under a Typical Stormwater Utility

ANY Single Family

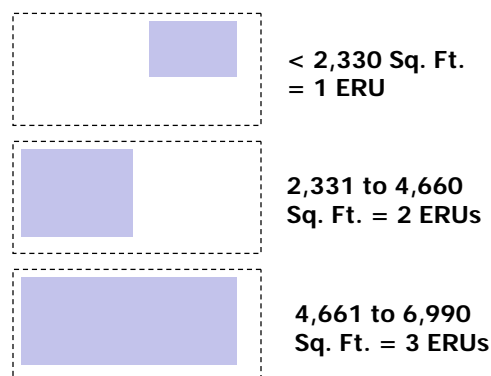
Detached House

One ERU (Billing Unit)



Properties Other Than SFD Lots

Based on City's 2,330 Sq. Ft. Billing Unit





How Did We Measure Impervious Surfaces?



- Used recent aerial photos to see and measure the square foot coverage of rooftops & paving



- Sampled 200 single family house lots throughout Rockville – measured rooftops, driveways, patios, sheds, etc., in a variety of neighborhoods, lot sizes, and age of houses



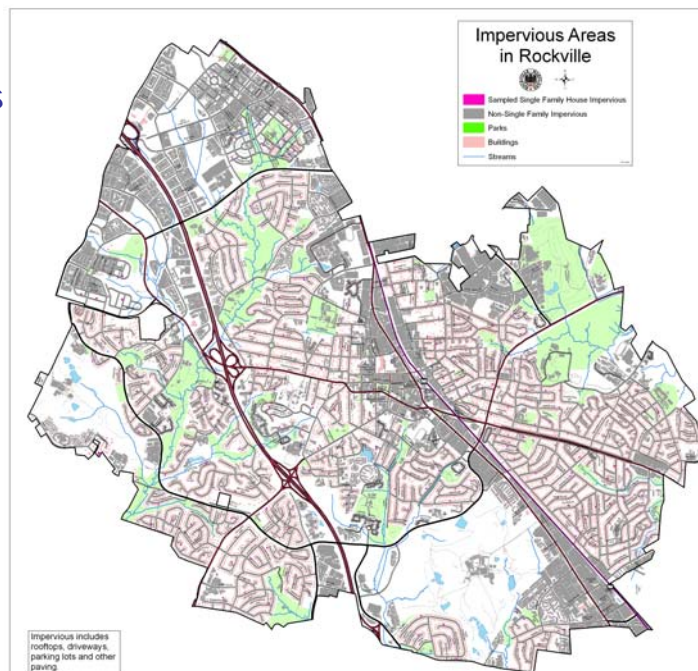
- Measured impervious area on all other properties in Rockville (offices, institutions, apartments, townhouses)

Rockville's Impervious Area:

28% Houses

68% Offices, Stores, Apartments, and Institutions

14% Schools and Government Facilities



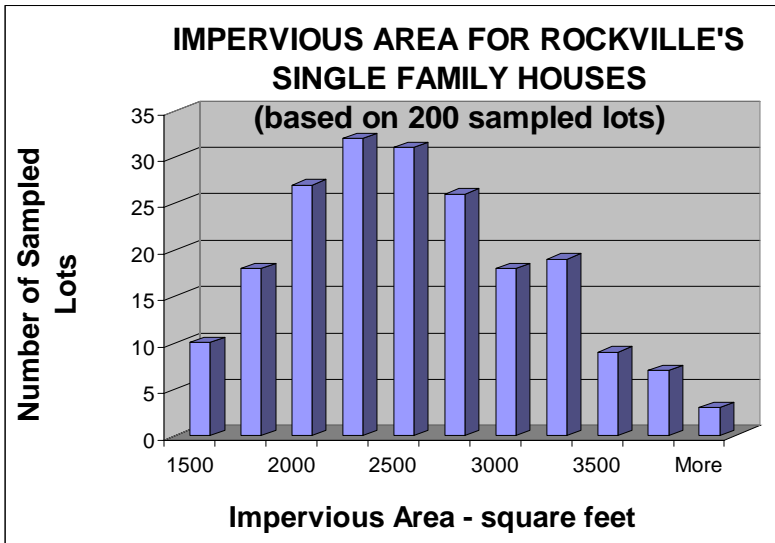
**EQUIVALENT RESIDENTIAL UNIT (ERU): THE MEDIAN
AMOUNT OF IMPERVIOUS AREA IN A TYPICAL SINGLE
FAMILY LOT**

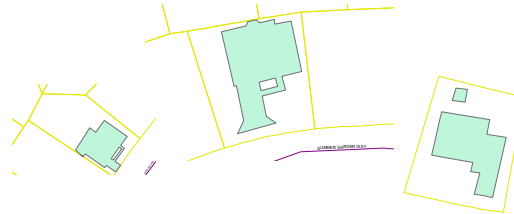
ROCKVILLE'S ERU = 2,330 square feet



City of Rockville

Stormwater Management Utility



**SWM UTILITY COST FOR A SINGLE FAMILY HOMEOWNER:****ONE HOUSE EQUALS
ONE ERU:****ESTIMATED COSTS –****FIRST YEAR OF SWM UTILITY:****\$ 55.80****AFTER SIX YEARS:****\$ 88.80**

Fee increases reflect program expansion over several years and drawn-down of the current SWM Fund balance to the reserve level.



Comparison of cost for a \$507,000 home

User Fee Vs. Real Property Tax**Annual Residential Program Cost**

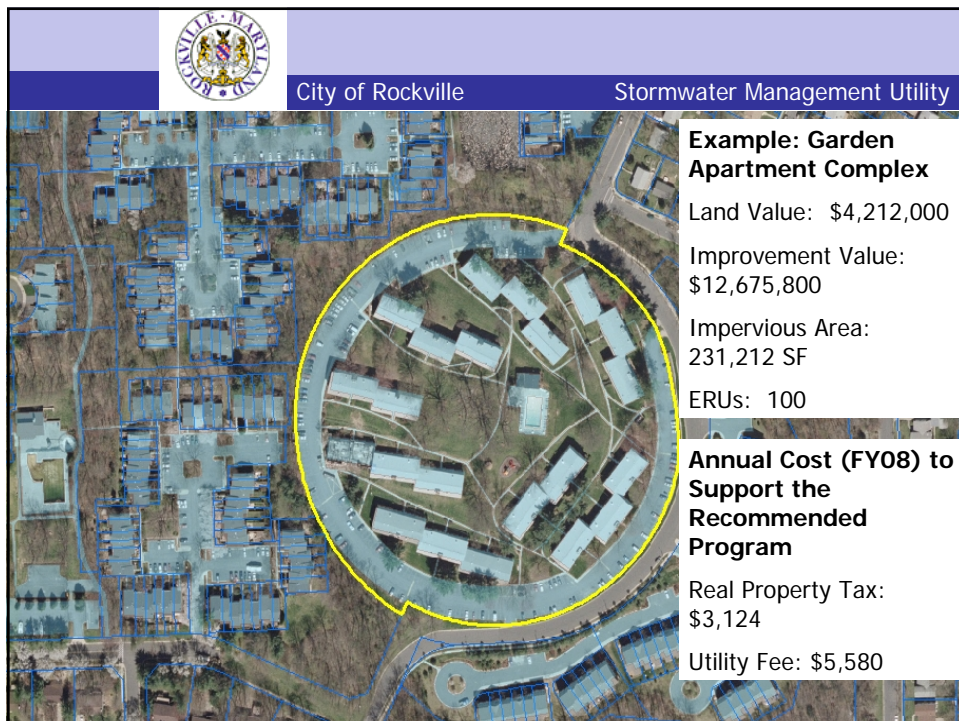
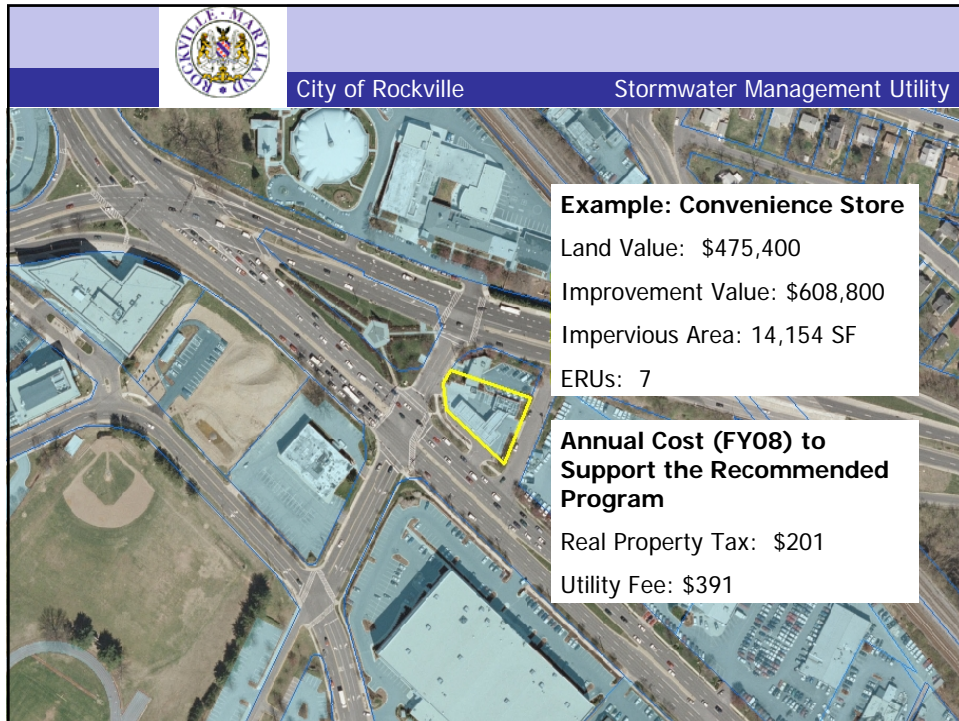
Utility Fee

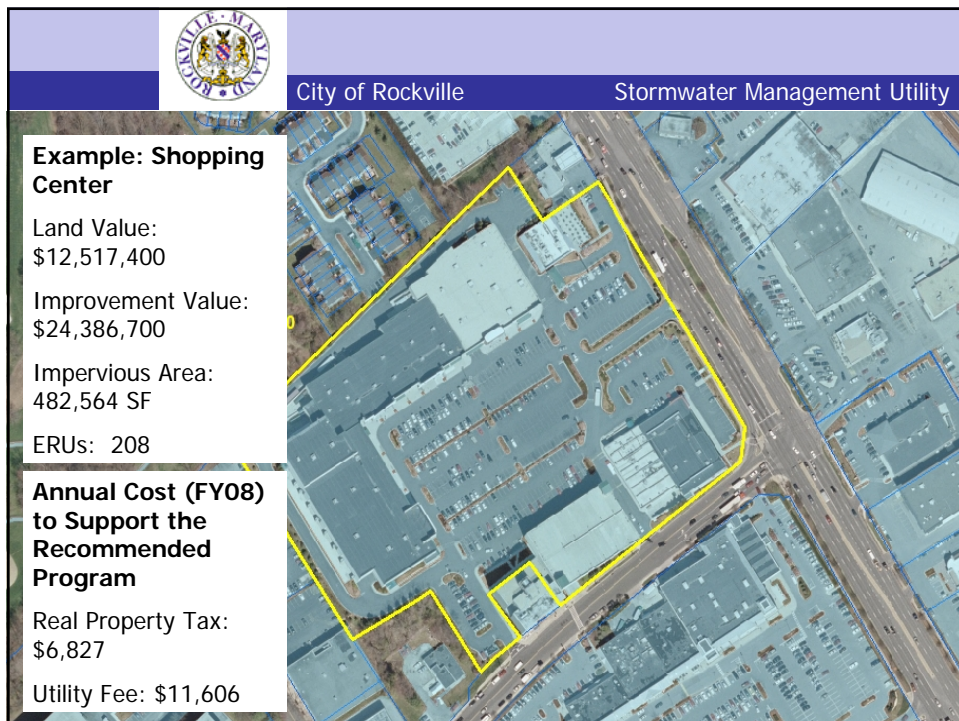
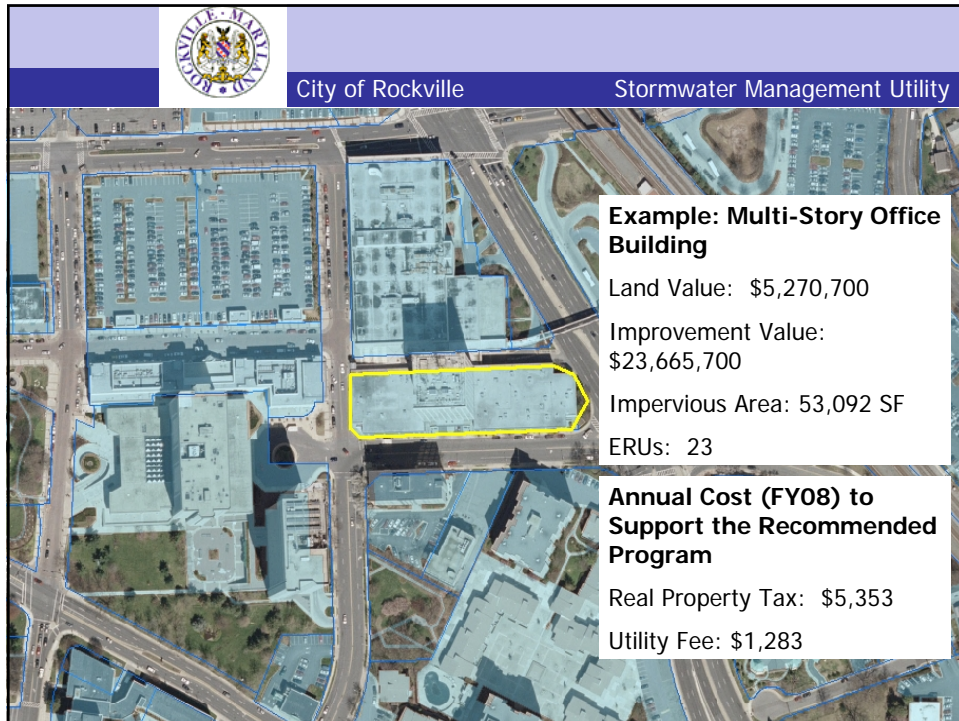
Real Property Tax

FY08**FY 14****FY 08****FY 14****SWM Utility Program Costs (annual)****\$ 55.80****\$ 88.80****\$ 93.80****\$255.47**

Both funding methods reflect funding capital projects from current SWM Fund Balance.

\$507,000 is from MWCOC average home sales price in Montgomery County for 2005.







What does this mean?

- Most City homeowners will pay less through a SWM utility fee than through a tax.
- Single family owners represent roughly 28% of the City's imperviousness. They will pay 28% of the revenue generated by a SWM utility fee.
- Commercial, institutional, and multi-family properties account for roughly 72% of the City's imperviousness. These will pay 72% of the revenue generated by a SWM utility fee.
- The impact on specific non-SFD properties will vary.



What About Houses With LID Features?

- Low Impact Development SWM - measures on individual lots such as rain barrels, rain gardens, or improved swales
- Voluntary and installed at the discretion and the cost of the homeowner
- May be removed at any time without permission from the City
- City is considering a cost-share program for homeowners' materials costs to encourage LID. We invite your input.





SWM Credits For Private Owners With Modern SWM Facilities

- Private onsite SWM facilities that meet current SWM standards will qualify for fee credits
- Typical credits are 25% rebate for SWM quality control and another 25% for SWM quantity control
- Fee credits are prorated for the amount of impervious area treated on the site



What About SWM Credits For Older SWM Facilities?

- SWM facilities built before the mid-1990s generally do not meet current SWM standards.
- The property owner is still obliged to maintain the facility to the original design standard through existing SWM maintenance easement agreements. Safety standards must also be met.
- The City is considering whether a minimal SWM Utility fee credit should be available to these private owners. We invite your input.



SWM Utility Billing

- One flat fee for all single family house owners
- All other property owners pay amount proportional to site imperviousness
- SWM Utility fees are proposed to be listed as a line item on the annual property tax bill
- Bills would be sent by Montgomery County in July – payment due in October.
- Montgomery County uses same method to collect its Water Quality Protection Charge fee



Billing for Townhouse Communities

- Impervious Areas are measured directly for each community
- Two billing options – each community can choose one:
 - ◆ Divide total community impervious area equally between number of townhouses
 - ◆ Bill each owner just for the lot's impervious area and send HOA bill for common areas to be divided.





Implementation Schedule

- Ongoing - Public Information sessions, articles and materials
- Summer - Fall, 2007 – Introduce and adopt enabling legislation – Mayor and Council
- Fall, 2007 – Spring, 2008 – Prepare SWM credits and billing files
- Spring, 2008 – Adopt resolution setting final SWM Utility Rate (equal to single family house fee) – Mayor and Council
- Summer, 2008 – First SWM Utility billing cycle (repeats annually)